

**Final Examinations
for Diploma in Electrocardiographic Technique : ECG Course**

**Paper – I
Cardiology**

Time : 3 Hours

Full Marks : 80

Question 1 is Compulsory.

Answer any Two from Question No. 2 to 5 and any Four from Question No. 6

Q-1) State **TRUE/FALSE** as applicable:-**10x1 = 10**

- i) Arthritis, Carditis, Chorea, Erythema Marginatum and Subcutaneous Nodules constitute the Jones minor criteria of the initial attack of Rheumatic Fever.
- ii) Pericarditis is characterized by ST elevation with Concavity upwards.
- iii) First Degree AV Block is characterized by prolongation of PR interval.
- iv) Spike before QRS complex is present when ventricle is paced by artificial pacemaker.
- v) When magnet is placed over implanted pacemaker the sensing function is switched off.
- vi) Inferior Wall STEMI is characterized by ST elevation in V1 V3 leads.
- vii) Anterior Wall Ischaemia is characterized by ST depression in leads II, III and aVF.
- viii) Sinus Tachycardia is associated with heart rate lower than sixty per minute and sequential relationship of P, QRS and T.
- ix) Narrow QRS is defined as QRS width less than 100 msec.
- x) ST elevation in Pericarditis is measured with respect to either the PR segment or TP segment.

Answer any Two from Question No. 2 to 5 and any Four from Question No. 6

2x20 = 40

- Q2. Describe the Major and minor criteria of Acute Rheumatic Fever. Describe the ECG findings and Blood investigations of Rheumatic Fever. 5+5+5+5 = 20
- Q3. Describe ECG pictures of STEMI and NSTEMI in different walls of the heart. 10+10 = 20
- Q4. What is Heart failure? Describe the features of Heart failure. Mention five causes of Heart failure. 5+10+5 = 20
- Q5. What is Infective Endocarditis? Describe the clinical features and outline of treatment of infective endocarditis. Describe five conditions that may cause infective endocarditis. 5+5+5+5 = 20
- Q6. Write short notes on (**Any Four**) of the five topics stated below:- **4 x 7½ = 30**
- a) Hypertrophic Obstructive Cardio Myopathy.
 - b) Temporary cardiac pacing.
 - c) Intubations of ICCU patients before Ventilation Support.
 - d) Syncope.
 - e) Pulse Oximeter.

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Paper – II
Electrocardiograph, Maintenance of ECG Machine, etc., First Aid Management of Cardiac Emergencies

Time – 3 hours

Full Marks – 80

Question 1 is Compulsory.
Answer any Two from Question No. 2 to 5 and any Four from Question No. 6

Q-1) State **TRUE/FALSE** as applicable:-**10x1 = 10**

- i) Acute Coronary Syndrome includes STEMI, NSTEMI and Unstable Angina.
- ii) Syncope and Seizure are synonymous.
- iii) Adenosine is the drug of first choice for treatment of PSVT.
- iv) Ventricular Tachycardia can cause Sudden Cardiac Death.
- v) NT Pro-BNP test helps differentiation between respiratory distress of heart cause and lung cause.
- vi) Trop T test can be falsely positive in co-existing renal failure.
- vii) Technical dextrocardia is due to wrong placement of electrodes.
- viii) Deep inspiration may abolish T inversion in lead III.
- ix) Varying RR interval can occur in Atrial Fibrillation and Sinus Arrhythmia.
- x) Pericarditis shows ST elevation with convexity upwards.

Answer any Two from Question No. 2 to 5 and any Four from Question No. 6

2x20 = 40

- Q2. Describe the different steps of maintenance of ECG, Holter and TMT machines.
10+5+5 = 20
- Q3. Describe the steps of 12 Lead ECG recording. What are the pitfalls of ECG in diagnosing heart disease?
10+10 = 20
- Q4. What is Sudden Cardiac Death? Describe the steps of basic life support. What are the common causes of SCD (Sudden Cardiac Death)?
5+10+5 = 20
- Q5. What are the common causes of Acute Left Ventricular Failure? Mention five common conduction defects that cause Syncope. What are the ECG features of (a) Complete Heart Block, (b) 2nd degree AV Block.
5+5+5+5 = 20
- Q6. Write short notes on (**Any Four**) of the five topics stated below:-
4 x 7½ = 30
- a) Cardiac Defibrillator.
 - b) ECG picture in Atrial Fibrillation.
 - c) ECG picture in Ventricular Tachycardia.
 - d) Troponin T.
 - e) Paroxysmal Supra Ventricular Tachycardia (PSVT).
